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09/768,323

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David Meiri

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EXAMINER

BURGESS, BARBARA N

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|---------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 09/768,323 | Applicant(s) MEIRI, DAVID | |
| | Examiner BARBARA N. BURGESS | Art Unit 2457 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to Amendment filed July 14, 2009. Claims 1-9 are presented for further examination.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou et al. (US Patent 5,905,897) in view of Kingsbury et al. (hereinafter "Kingsbury", US Patent Publication 2003/0061395 A1).

As per claim 1, Chou discloses a method for using a computer to assist a particular data storage machine in posting a message on a message list stored in a memory, said message list being accessible to a plurality of processors, said method comprising:

- Selecting a new-message slot (column 3, lines 3-5, 11-16, column 4, lines 42-45, 66-67; The interrupt controller has pending registers in which interrupt requests are stored);

- Placing said message in said new-message slot (column 5, lines 30-40; Interrupt requests are placed in the pending registers of the interrupt controller).
- Modifying said new-message slot to specify an intended recipient of said message, said intended recipient being selected from said plurality of processors (column 3, lines 11-16, column 4, lines 50-60, column 5, lines 3-6, 52-64; The destination register, vector register, and priority register associated with the interrupt requests specifies the processor that the interrupt request is intended).

Chou does not explicitly disclose:

- Receiving, from one of a plurality of processors, a message to be posted on said message list, said message having an intended recipient selected from said plurality of processors having access to said message list;
- Selecting a new message to be posted on said message list;
- Said intended recipient being selected from said plurality of processor having access to said message list.

However, in an analogous art, Kingsbury teaches a multiprocessor node having a shared local memory. A mailbox data structure (message list) servers as a receiving area for messages being sent to specific processors. The mailbox has an array of message slots for receiving and storing messages for particular processors (paragraphs [0029, 0032, 0038]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Kingsbury message list in Chou's method enabling nodes to pass messages to each other.

As per claim 2, Chou does not explicitly disclose the method of claim 1 further comprising inserting said new-message slot into said message list, said message list including a first existing-message slot having a pointer to a second existing-message slot.

However, Kingsbury teaches availability indicators that indicate if a message slot is available to receiving messages, if a message is present in a message slot, and that a message is no longer present in the message slot. Indicators also show the number of slots filled or currently filling as well as a full mailbox (paragraphs [0013-0014, 0034]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Kingsbury's pointer in Chou's method in order to determine available message slots.

As per claim 3, Chou does not explicitly disclose the method of claim 2 wherein inserting said new-message slot into said message list comprises setting a first pointer on said new-message slot to point to said first existing-message slot and a second pointer on said new-message slot to point to said second existing message-slot.

However, Kingsbury teaches availability indicators that indicate if a message slot is available to receiving messages, if a message is present in a message slot, and that a message is no longer present in the message slot. Indicators also show the number of slots filled or currently filling as well as a full mailbox (paragraphs [0013-0014, 0034]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Kingsbury's pointer in Chou's method in order to determine available message slots.

As per claim 4, Chou does not explicitly disclose the method of claim 3 wherein inserting said new-message slot into said message list further comprises setting said pointer associated with said first existing-message slot to point to said new-message slot.

However, Kingsbury teaches availability indicators that indicate if a message slot is available to receiving messages, if a message is present in a message slot, and that a message is no longer present in the message slot. Indicators also show the number of slots filled or currently filling as well as a full mailbox (paragraphs [0013-0014, 0034]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Kingsbury's pointer in Chou's method in order to determine available message slots.

As per per claim 5, Chou does not explicitly disclose the method of claim 1 wherein modifying said new-message slot to specify an intended recipient comprises modifying a destination mask associated with said new-message slot, said destination mask including information specifying all intended recipients of said message.

However, Kingsbury teaches availability indicators that indicate if a message slot is available to receiving messages, if a message is present in a message slot, and that a

message is no longer present in the message slot. Indicators also show the number of slots filled or currently filling as well as a full mailbox (paragraphs [0013-0014, 0034]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Kingsbury's pointer in Chou's method in order to determine available message slots.

As per claim 6, Chou does not explicitly disclose the method of claim 5 wherein modifying said destination mask comprises

- Selecting, from a plurality of constituent data-elements of said destination mask, each of said constituent data-elements corresponding to one of said processors from said plurality of processors, a selected data-element corresponding to a selected processor;
- Modifying said selected data-element to indicate that said selected processor is an intended recipient.

However, Kingsbury teaches availability indicators that indicate if a message slot is available to receiving messages, if a message is present in a message slot, and that a message is no longer present in the message slot. Indicators also show the number of slots filled or currently filling as well as a full mailbox (paragraphs [0013-0014, 0034]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Kingsbury's pointer in Chou's method in order to determine available message slots.

As per claim 7, Chou does not explicitly disclose the method of claim 1 further comprising updating a message directory to indicate the presence of said new-message slot in said message list, said message directory being accessible to said plurality of processors.

However, in an analogous art, Kingsbury teaches indicators examined to determine whether a received message in the mailbox (paragraphs [0034, 0045]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Kingsbury updating message directory in Chou's method to indicate a new message indicating the number of slots either filled or currently filling or if all slots are full so the message is not sent to the mailbox.

As per claim 8, Chou does not explicitly disclose the method of claim 7 wherein updating said message directory comprises updating an attention mask containing information indicative of which processors from said plurality of processors are intended recipients of messages contained in said message list.

However, Kingsbury teaches availability indicators that indicate if a message slot is available to receiving messages, if a message is present in a message slot, and that a message is no longer present in the message slot. Indicators also show the number of slots filled or currently filling as well as a full mailbox (paragraphs [0013-0014, 0034]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Kingsbury's pointer in Chou's method in order to determine available message slots.

As per claim 9, Chou does not explicitly disclose the method of claim 7 wherein updating said attention mask comprises:

- Selecting from a plurality of constituent data-elements of said attention mask, each of said constituent data-elements corresponding to one of said processors from said plurality of processors, a selected data-element corresponding to a selected processor;
- Modifying said selected data-element to indicate existence of a new message for which said selected processor is an intended recipient.

However, Kingsbury teaches availability indicators that indicate if a message slot is available to receiving messages, if a message is present in a message slot, and that a message is no longer present in the message slot. Indicators also show the number of slots filled or currently filling as well as a full mailbox (paragraphs [0013-0014, 0034]).

Therefore, one of ordinary skill in the art at the time the invention was made would have found it obvious to implement or incorporate Kingsbury's pointer in Chou's method in order to determine available message slots.

Response to Arguments

1. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BARBARA N. BURGESS whose telephone number is (571)272-3996. The examiner can normally be reached on M-F (8:00am-4:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Barbara N Burgess/
Examiner, Art Unit 2457

December 7, 2009

/Barbara N Burgess/

Examiner, Art Unit 2457

Barbara N Burgess
Examiner
Art Unit 2457